Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	879	maillard and browning	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/09/16 08:57
L2	2391	sugar adj acid	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/09/16 09:00
L3	7	l1 and l2	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/09/16 08:57
L4	16	sugar adj acid and maillard	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/09/16 09:04
L5	1503	sugar and maillard	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/09/16 09:04
L6	711	sugar and maillard and browning	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/09/16 09:04
L7	59	sugar near acid and maillard and browning	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/09/16 09:07
L8	170	$7gluconic adj acid and (maillard or browning)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/09/16 09:08

L9	14	$7gluconic adj acid same (maillard or browning)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/09/16 09:08

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=> file fsta
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FILE 'FSTA' ENTERED AT 09:28:38 ON 16 SEP 2005
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FILE COVERS 1969 TO DATE.

=> di(w)keto(w)gluconic or diketo(w)gluconic
DI(W)KETO(W)GLUCONIC IS NOT A RECOGNIZED COMMAND
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For a list of commands available to you in the current file, enter
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=> s di(w)keto(w)gluconic or diketo(w)gluconic
          3115 DI
           515 KETO
           553 GLUCONIC
             0 DI(W)KETO(W)GLUCONIC
            35 DIKETO
           553 GLUCONIC
             2 DIKETO(W)GLUCONIC
L1           2 DI(W)KETO(W)GLUCONIC OR DIKETO(W)GLUCONIC

=> d l1 all 1-2

L1   ANSWER 1 OF 2  FSTA  COPYRIGHT 2005 IFIS on STN
AN   2000(01):B0085   FSTA
TI   Screening for L-sorbose and L-sorbosone dehydrogenase producing microbes
     for 2-keto-L-gulonic acid production.
AU   Lee, H. W.; Pan, J. G.
CS   Correspondence (Reprint) address, J. G. Pan, Bioprocess Eng. Div., Korea
     Res. Inst. of Biosci. & Biotech. (KRIBB), PO Box 115, Yusong, Taejon
     305-600, Korea
SO   Journal of Industrial Microbiology & Biotechnology, (1999), 23 (2)
     106-111, 33 ref.
     ISSN: 0169-4146
DT   Journal
LA   English
AB   Optimization of the oxidation of L-sorbose to 2-keto-L-gulonic acid (2KLG)
     by microbial L-sorbose- and L-sorbosone dehydrogenases is of industrial
     interest as 2KLG is a direct precursor of L-ascorbic acid.  In order to
     isolate novel microorganisms with these enzyme activities, a new screening
     method was studied with a presumption that microorganisms reuse their
     metabolic products when principal C sources are exhausted.  When various
     keto-aldonic acid-producing microorganisms were tested for their ability
     to grow in minimal media containing such products as 2.5-diketo-
     gluconic acid, 2-keto-D-gluconic acid, 5-keto-D-gluconic acid or
     2-keto-L-gulonic acid, they grew with these keto-aldonic acids as the sole
     C source.  By enriching the isolates collected from screening samples for
     their growth in minimal medium containing 2KLG as the sole C source, as
     many as 50% of selected strains showed L-sorbose- and L-sorbosone
     dehydrogenase activities.  In spite of the presence of these enzymes, no
     significant amount of 2KLG was detected in the culture broth, possibly due
     to 2KLG reductase activity, indicating that the direct screening for 2KLG
     producer microorganisms would be less successful.  Results suggest that
     the screening strategy using 2KLG as a C source is a useful method for the
     selective screening of microorganisms with L-sorbose- and L-sorbosone
     dehydrogenases, and that a similar strategy may be applied to other cases.
CC   B (Biotechnology)
CT   DEHYDROGENASES; MICROORGANISMS; SCREENING

L1   ANSWER 2 OF 2  FSTA  COPYRIGHT 2005 IFIS on STN
AN   1993(03):B0001   FSTA
TI   Intergeneric protoplast fusion between Gluconobacter oxydans and
     Corynebacterium species.
AU   Verma, V.; Qazi, G. N.; Parshad, R.
CS   Reg. Res. Lab., Canal Rd., Jammu Tawi-180 001, India
SO   Journal of Biotechnology, (1992), 26 (2/3) 327-330, 14 ref.
     ISSN: 0168-1656
DT   Journal
LA   English
AB   Intergeneric protoplast fusion between 2,5-diketo-
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gluconic acid producing Gluconobacter oxydans (ATCC 9937) and a mutant strain of Corynebacterium species (ATCC 31090), capable of reducing 2,5-**diketo-gluconic** acid to 2-keto-L-gulonic acid, a penultimate step in vitamin C production resulted in viable recombinants. Some of the fusion products exhibited the capacity to convert D-glucose to 2-keto-L-gulonic acid, but the conversion rate was low.
CC B (Biotechnology)
CT ASCORBIC ACID; BACTERIA; CELLS; CORYNEBACTERIUM; MICROORGANISMS; VITAMINS; GLUCONOBACTER; PROTOPLASTS; VITAMIN C

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=> file caplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       6.90       7.11

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=> s di(w)keto(w)gluconic or diketo(w)gluconic
        464125 DI
         57507 KETO
          9098 GLUCONIC
             0 DI(W)KETO(W)GLUCONIC
          3782 DIKETO
          9098 GLUCONIC
             9 DIKETO(W)GLUCONIC
L2           9 DI(W)KETO(W)GLUCONIC OR DIKETO(W)GLUCONIC

=> d 12 cbib,ab 1-9

L2   ANSWER 1 OF 9  CAPLUS  COPYRIGHT 2005 ACS on STN
2003:812555   Document No. 140:283223  Expression and structural
     characterization of 2,5-diketo-D-gluconic acid reductase: a commercially
     important enzyme for biosynthesis of vitamin C.  Sanli, Gulsah (Florida
     State Univ., Tallahassee, FL, USA).  160 pp.  Avail. UMI, Order No.
     DA3076203  From: Diss. Abstr. Int., B 2003, 63(12), 5827 (English) 2002.
AB   Unavailable

L2   ANSWER 2 OF 9  CAPLUS  COPYRIGHT 2005 ACS on STN
2003:696653   Document No. 139:213341  Browning agent for foodstuffs.  Boston,
     Matthew G.; Whited, Gregory M. (Genencor International, Inc., USA).  PCT
```

Int. Appl. WO 2003071879 A1 20030904, 34 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2003-US5311 20030221. PRIORITY: US 2002-PV358919 20020222.

AB A browning agent for foodstuffs having at least two carbonyl groups is disclosed. A method for using the browning agent in or on a substrate is also disclosed. The browning agent may be coated onto foodstuffs such as biscuits, pizza, pie coverings or hash brown potatoes and heated by microwave or convection oven to induce browning.

L2 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

2002:276125 Document No. 136:306018 Protein and cDNA sequence of a novel 2,5-diketo-D-gluconic acid reductases and its characterization and kinetics analyses. Donnelly, Mark; Eschenfeldt, William H.; Trent, Jonathan (Genencor International, Inc., USA). PCT Int. Appl. WO 2002029019 A2 20020411, 58 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2001-US42445 20011002. PRIORITY: US 2000-684385 20001004.

AB The present invention discloses protein and DNA sequences of a novel 2,5-diketo-D-gluconic acid reductase isolated from environment, characterization of the enzyme and methods that can be used to provide new catalysts with desirable traits for industrial processes. In particular, the invention discloses that the novel 2,5-diketo-D-gluconic acid reductase reductases was isolated from the environment using PCR, plasmid vectors encoding the enzyme were constructed, kinetics of the enzyme was performed, and its specific mutants were constructed and expressed.

L2 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

2001:435469 Document No. 135:30975 Process for the conversion of organic materials, particularly saccharide materials, comprising an enzymatic oxidation step in the presence of ruthenium or palladium. Fouache, Catherine; Tamion, Rodolphe; Fleche, Guy; Moine, Didier; Fuertes, Patrick (Roquette Freres, Fr.). U.S. Pat. Appl. Publ. US 20010003651 A1 20010614, 8 pp. (English). CODEN: USXXCO. APPLICATION: US 2000-728437 20001201. PRIORITY: FR 1999-15434 19991207.

AB A process for the conversion of an organic material comprising an oxidation step during which an organic material undergoes the oxidizing action of an enzymic means capable of generating hydrogen peroxide, wherein said oxidation step is carried out, wholly or partly, in the presence of 0.001 to 1 of a metal selected from ruthenium, palladium and mixts. thereof.

L2 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

2000:620676 Document No. 133:176267 A microorganism of Corynebacterium sp. having productivity of calcium 2-keto-l-gulonic acid as well as a method of production for calcium 2-keto-l-gulonic acid. Kim, Yong-duk; Baek, Kwang-hyun (Miwon Ltd., S. Korea). Repub. Korea KR 9706162 B1 19970424, No pp. given (Korean). CODEN: KRXXFC. APPLICATION: KR 1993-29127 19931222.

AB Corynebacterium sp. MI-43 (KFCC-10806) strain having 2-keto-l-gulonic acid

generating capability and yeast concentrated extract requirement is favorably cultivated by a cultivation medium including 2,5-**diketo-gluconic** acid to collect and to retrieve 2-keto-L-gulonic acid.

L2 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN
2000:476011 Document No. 133:70701 Preparation of 2,5-diketo-D-gluconate (2,5-DKG) reductase in Escherichia coli and Erwinia. Yin, Guanglin; Chen, Ceshi (Shanghai Research Center of Biological Engineering, Chinese Academy of Sciences, Peop. Rep. China). Faming Zhuanli Shenqing Gongkai Shuomingshu CN 1221792 A 19990707, 10 pp. (Chinese). CODEN: CNXXEV. APPLICATION: CN 1997-125210 19971230.

AB The present invention relates to the preparation of 2,5-diketo-D-gluconate (2,5-DKG) reductase which can be applied to improve production efficiency of 2,5-**diketo-gluconic** acid (2-KLG, vitamin C precursor) from glucose. The 2,5-DKG reductase gene is cloned from Corynebacterium sp. strain SCB3058 and mutated by PCR to change nucleotide A434→G and nucleotide G734→C for His145→Arg and Val245→Ala substitution. The modified 2,5-DKG gene is placed under the control of Plac (lactase gene promoter) in the plasmid PBL4 and the distance between translation initiation signal SD and AUG codon is 8bp. Streptomycin-resistance gene is used as the selection marker. Plasmid PBL4 (Escherichia coli vector) is modified to plasmid PBLS for gene expression in Erwinia.

L2 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN
1999:637425 Document No. 131:334470 Screening for L-sorbose and L-sorbosone dehydrogenase producing microbes for 2-keto-L-gulonic acid production. Lee, H-W.; Pan, J-G. (Bioprocess Engineering Division, Korea Research Institute of Bioscience and Biotechnology (KRIBB), Taejon, 305-600, S. Korea). Journal of Industrial Microbiology & Biotechnology, 23(2), 106-111 (English) 1999. CODEN: JIMBFL. ISSN: 1367-5435. Publisher: Stockton Press.

AB Acetic acid bacteria incompletely oxidize L-sorbose to 2-keto-L-gulonic acid (2KLG) by L-sorbose- and L-sorbosone dehydrogenases. In order to isolate novel microorganisms with these enzyme activities, a new screening method has been studied with a presumption that microorganisms reuse their metabolic products when principal carbon sources are exhausted. When various keto-aldonic acid-producing microorganisms were tested for the ability to grow in minimal media containing such products as 2,5-**diketo-gluconic** acid, 2-keto-D-gluconic acid, 5-keto-D-gluconic acid or 2-keto-L-gulonic acid, they grew with these keto-aldonic acids as the sole carbon source. By enriching the isolates collected from screening samples for their growth in minimal medium containing 2KLG as the sole carbon source, as much as 50% of selected strains showed L-sorbose- and L-sorbosone dehydrogenase activities. In spite of the presence of these enzymes, no significant amount of 2KLG was detected in the culture broth, possibly due to 2KLG reductase activity, indicating that the direct screening for 2KLG producer microorganisms would be less successful. These results suggest that the screening strategy using 2KLG as a carbon source is a useful method for the selective screening of microorganisms with L-sorbose- and L-sorbosone dehydrogenases, and that a similar strategy may be applied to other cases.

L2 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN
1997:446077 Document No. 127:118081 Plasmid profile of Erwinia herbicola ATCC 21998. Koul, S.; Verma, V.; Kumar, Anand; Qazi, G. N. (Division of Biotechnology, Regional Research Laboratory (CSIR), Jammu Tawi, 180 001, India). Current Science, 72(11), 876-879 (English) 1997. CODEN: CUSCAM. ISSN: 0011-3891. Publisher: Current Science Association.

AB Extra-chromosomal genome study of Erwinia herbicola ATCC 21998 was carried out. Two plasmids (pVQ1, pVQ2: mol. wt 7.4 and 8.0 kb resp.) were identified. One of the plasmids (pVQ2) was cured off and a restriction endonuclease map of the other plasmid (pVQ1) is established. E. herbicola

ATCC 21998 being a keto-acid producing bacteria like Gluconobacter oxydans ATCC 9937 converts glucose to 2,5-**diketo gluconic** acid by a membrane-bound direct glucose dehydrogenase system. Plasmid mediation of direct glucose oxidation in G. oxydans ATCC 9937 (refs 1, 2) prompted us to study the presence of glucose dehydrogenase gene on the plasmid of E. herbicola. Based on DNA/DNA hybridization it is suggested that glucose dehydrogenase gene is encoded in 4.3 kb Sac I fragment of plasmid pVQ1.

L2 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN
1960:30809 Document No. 54:30809 Original Reference No. 54:6021i,6022c
Chemicals from cereals: fermentation acids. Tanner, Fred W., Jr. (Chas. Pfizer Co., Inc., Brooklyn, NY). Cereal Science Today, 4, 256-8 (Unavailable) 1959. CODEN: CSCTAD. ISSN: 0009-0360.
AB Fermentation acids now produced are acetic, lactic, citric, oxalic, gluconic, ascorbic, fumaric, itaconic and kojic; those that could be produced are bionic acid from various sugars, such as lactobionic acids, tartaric from 2-keto- or 5 keto-gluconic and 2,5-**diketo-gluconic**; glutamic and D-allo-isocitric may be produced in the future. l-Lysine, l-glutamic acid, and l-tryptophan also can be produced from cereals.

=> file stnguide

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	32.20	39.31

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CA SUBSCRIBER PRICE	-5.84	-5.84

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